

### **LISTING OF THE CLAIMS**

Please cancel claims 14-21 and add new claims 22-37. Claims 1-13 were previously withdrawn by the Examiner. No new matter is believed to be introduced by the aforementioned new claims. The following listing of claims will replace all prior versions and listings of claims in the application.

1. **(Withdrawn)** A method of configuring an optoelectronic device to operate in a range of temperatures, the method comprising:

(a) while operating the optoelectronic device at a first temperature, adjusting a first control parameter to satisfy a first operating requirement, and recording an associated first value of the first control parameter;

(b) while operating the optoelectronic device at a second temperature, adjusting the first control parameter to satisfy the first operating requirement, and recording an associated second value of the first control parameter;

(c) determining a sequence of values for the first control parameter for a corresponding sequence of temperatures in a predefined range of temperatures in accordance with the first and second recorded values of the first control parameter; and

(d) storing a set of control values for the first control parameter into a programmable device within the optoelectronic device, the set comprising at least a subset of the determined sequence of values.

2. **(Withdrawn)** The method as recited in claim 1, further comprising operating the optoelectronic device within a range of operating temperatures, the optoelectronic device having stored in the programmable device therein the set of control values.

3. **(Withdrawn)** The method as recited in claim 1, wherein (a) and (b) comprise adjusting the first control parameter of the optoelectronic device to satisfy a second operating requirement while also satisfying the first operating requirement.

4. **(Withdrawn)** The method as recited in claim 1, wherein (a) and (b) comprise adjusting a second control parameter of the optoelectronic device to satisfy the first operating requirement.

5. **(Withdrawn)** The method as recited in claim 1, wherein (a) and (b) comprise adjusting a second control parameter of the optoelectronic device to satisfy a second operating requirement.

6. **(Withdrawn)** The method as recited in claim 1, wherein the first operating requirement is one of an optical output power requirement, an extinction ratio requirement, a jitter minimization requirement, a temperature compensation requirement, a crossing percentage requirement, a mask hit requirement, and a mask margin requirement.

7. **(Withdrawn)** The method as recited in claim 3, wherein the second operating requirement is one of an optical output power requirement, an extinction ratio requirement, a jitter minimization requirement, a temperature compensation requirement, a crossing percentage requirement, a mask hit requirement, and a mask margin requirement.

8. **(Withdrawn)** The method as recited in claim 1, wherein the first temperature is at or near a low end of a predefined temperature operating range of the optoelectronic device and the second temperature is at or near a high end of the predefined temperature operating range of the optoelectronic device.

9. **(Withdrawn)** A method of configuring an optoelectronic device, comprising:

(a) while operating the optoelectronic device at a first temperature, adjusting a first control parameter to satisfy a first operating requirement, and recording an associated first value of the first control parameter, wherein the first operating requirement is one of an optical output power requirement, an extinction ratio requirement, and a jitter minimization requirement;

(b) while operating the optoelectronic device at a second temperature, adjusting the first control parameter to satisfy the first operating requirement, and recording an associated second value of the first control parameter;

(c) determining a first temperature coefficient in accordance with the first and second recorded values of the first control parameter and determining at least one associated control value; and

(d) storing the at least one associated control value into a programmable device within the optoelectronic device.

10. **(Withdrawn)** The method as recited in claim 9, wherein (a) further comprises while operating the optoelectronic device at the first temperature, adjusting a second control parameter to satisfy a second operating requirement, and recording an associated first value of the second control parameter.

11. **(Withdrawn)** The method as recited in claim 10, wherein (b) further comprises while operating the optoelectronic device at the second temperature, adjusting the second control parameter to satisfy the second operating requirement, and recording an associated second value of the second control parameter.

12. **(Withdrawn)** The method as recited in claim 11, wherein (c) further comprises determining a second temperature coefficient in accordance with the first and second recorded values of the second control parameter and determining at least one associated control value.

13. **(Withdrawn)** The method as recited in claim 12, wherein (d) further comprises storing the at least one associated control value into a programmable device within the optoelectronic device.

14. – 21. **(Canceled)**

22. (New) A test and configuration system, comprising:
- a temperature control device configured for thermal communication with one or more optoelectronic transceivers;
  - an optical signal analyzer configured and arranged to communicate with an optoelectronic transceiver that is thermally coupled with the temperature control device;
  - a host system configured for communication with the temperature control device, any optoelectronic transceivers that are thermally coupled with the temperature control device, and with the optical signal analyzer, the host system comprising:
    - a central processing unit;
    - a user interface; and
    - a memory that is configured to communicate with the central processing unit and the user interface, where the memory stores:
      - an operating system;
      - control parameter setup procedures;
      - operational requirement settings; and
      - temperature compensation values;
  - a data bus configured to couple the host system with any optoelectronic transceivers thermally coupled with the temperature control device; and
  - a control bus configured to couple the host system with any optoelectronic transceivers thermally coupled with the temperature control device.

23. (New) The test and configuration system as recited in claim 22, wherein the data bus is configured to carry test data patterns.

24. (New) The test and configuration system as recited in claim 22, wherein the operating system stores instructions for one or more of: communicating; processing data; accessing data; storing data; and, searching data.

25. (New) The test and configuration system as recited in claim 22, wherein the memory additionally stores extinction ratio and optical power level setup procedures.

26. (New) The test and configuration system as recited in claim 22, wherein the control bus is configured to carry control parameters from the host computer to an optoelectronic transceiver under test.

27. (New) The test and configuration system as recited in claim 22, wherein the operational requirement settings include information concerning jitter minimization.

28. (New) The test and configuration system as recited in claim 22, wherein the temperature compensation values relate to the computation of temperature compensation and jitter minimization values at various temperatures.

29. (New) The test and configuration system as recited in claim 22, wherein the host computer is configured to control operation of the temperature control device and any optoelectronic transceivers under test.

30. (New) The test and configuration system as recited in claim 22, wherein the test and configuration system is configured to operate in connection with a plurality of optoelectronic transceivers simultaneously.

31. (New) The test and configuration system as recited in claim 22, wherein the control parameter setup procedures are concerned with testing and configuration of an optoelectronic transceiver.

32. (New) The test and configuration system as recited in claim 22, wherein the control parameter setup procedures are concerned with one or more of the following operating requirements: jitter minimization; optical output power; extinction ratio; crossing percentage; mask hits; mask margin; and, avalanche photodiode temperature compensation.

33. (New) The test and configuration system as recited in claim 22, wherein the host system is associated with a computer-readable storage medium that carries instructions executable by the host system for performing a method comprising:

- while operating an optoelectronic device at a first temperature, adjusting a first control parameter to satisfy a first operating requirement, and recording an associated first value of the first control parameter;

- while operating the optoelectronic device at a second temperature, adjusting the first control parameter to satisfy the first operating requirement, and recording an associated second value of the first control parameter;

- determining a sequence of values for the first control parameter for a corresponding sequence of temperatures in a predefined range of temperatures in accordance with the first and second recorded values of the first control parameter; and

- storing a set of control values for the first control parameter into a programmable device within the optoelectronic device, the set comprising at least a subset of the determined sequence of values.

34. (New) A test and configuration system, comprising:

- a temperature control device configured for thermal communication with an optoelectronic transceiver that includes a receiver portion having a photodiode;

- a ROSA test data stream source configured for communication with the photodiode;

- a host system configured for communication with the temperature control device, and with the optoelectronic transceiver;

- a data bus configured to couple the host system with any optoelectronic transceivers that are thermally coupled with the temperature control device; and

- a control bus configured to couple the host system with any optoelectronic transceivers that are thermally coupled with the temperature control device.

35. (New) The test and configuration system as recited in claim 34, wherein the photodiode of the optoelectronic transceiver comprises an avalanche photodiode.

36. (New) The test and configuration system as recited in claim 34, wherein a test data stream produced by the ROSA test data stream source comprises an optical test data stream.

37. (New) The test and configuration system as recited in claim 34, wherein the ROSA test data stream source is configured to send optical signals to the transceiver, as well as to receive optical signals from the transceiver.